2006-2007 Entry Form

TARGET ZERO AWARD Nomination for Achievements in Traffic Safety

Category: Speed-Related Collisions

Entry Name: Spokane Viaduct Project: 2006-2007 "Downtown Freeway Fix"

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Executive Summary

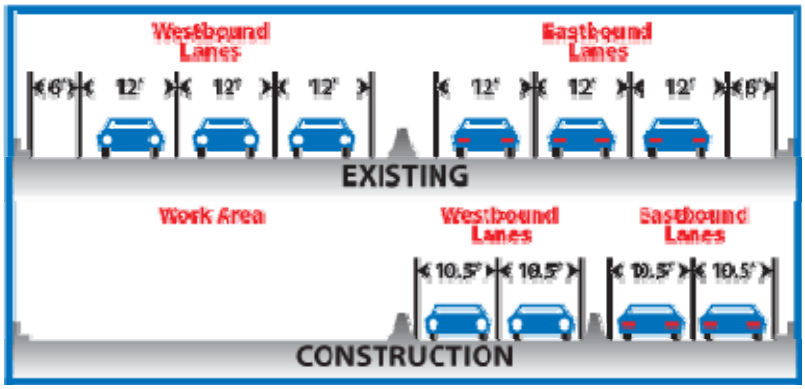
Numerous agencies in Spokane partnered to plan for a major freeway resurfacing project that, during two consecutive summer construction seasons, would reduce available lanes by 33%, eliminate shoulders, reduce lane width, substantially lower the speed limit, and close many downtown freeway ramps and impact surface street traffic flow, access to regional hospitals, and commerce in the downtown area. Associated with these conditions was the recognition that the freeway could easily become completely blocked, hampering the response of public safety agencies. The affected organizations and agencies created a comprehensive plan that involved public education, enforcement, response coordination, and the revision of traffic signals and lanes on city streets in the area. As a result of the coordinated efforts, traffic collisions were substantially reduced as contrasted with similar periods when all lanes are open without long-term construction.

Situation/Problem

In May 2006, the Interstate 90 resurfacing project began on the viaduct in downtown Spokane. The project was scheduled to last from May through September of 2006 and 2007 and imposed significant impacts to traffic with severe lane-width restrictions, detours and the closure of ramps and exits.

Interstate 90 is a major link to all parts of the region and it also contains multiple access points to downtown Spokane and to the region's hospitals and medical care. According to 2006 Washington State Department of Transportation statistics, an average of 79,000 vehicles use the viaduct each day.

The goal of the construction project was to resurface the eastbound lanes of I-90 in 2006 and resurface the westbound lanes of I-90 in 2007. During each construction season, three lanes of traffic in each direction were restricted down to two lanes in each direction with no shoulders. Concrete barriers were used to separate the eastbound and westbound lanes. Concrete barriers were also placed on the outside of each set of lanes preventing a traditional shoulder area for vehicles to stop. Plans also called for the closure of multiple exit ramps and on ramps during construction. The downtown viaduct work was scheduled for May through September of 2006 and 2007. It was reasonable to expect and plan for collisions and other types of incidents which would create complete blockages, making conventional approaches or responses to the scene extremely difficult or potentially impossible. Additionally, it was anticipated that significant collision increases would occur in the approach areas to the viaduct due to the viaduct's constriction and the resulting slow downs and traffic congestion.



The final major concern was the affect any collision or road blockage within the construction zone would have on the ability of ambulances to complete the emergency transportation of patients to the hospitals serviced by I-90.

Actions Taken

Stakeholder input was sought from the Washington State Patrol, the Washington State Department of Transportation (DOT), American Medical Response (AMR) ambulance company, the Spokane Fire Department, the Spokane Police Department, the City of Spokane Engineers, the Spokane County Sheriff's Office, local hospitals, contractors associated with the actual resurfacing project, local business owners, local tow truck companies and the general public.

DOT's primary objective during this process was to complete the construction project as quickly and efficiently as possible while minimizing the impact to the motoring public, local hospitals and downtown Spokane businesses.

DOT created a website describing the project's goals, construction timelines, roadways/ramps affected and possible alternate routes. DOT also produced informational brochures for public distribution. DOT and the WSP created public safety announcements and press releases which were broadcast by the region's media. These announcements continually informed the motoring

public of updates/restrictions/challenges affecting the viaduct project and how it affected their commute. Media contacts for the 2007 construction season based on WSP public information officer records were 6 newsprint stories, over 50 radio and TV spots, 4 local TV ride-a-longs with troopers and 1 newsprint media ride-a-long with a trooper during a viaduct enforcement emphasis patrol.

WSP and DOT worked together on planning the actual set up of the construction zone, signing, speed limits within the zone and areas where WSP personnel could perform enforcement operations. WSP and DOT also worked with local public safety agencies and tow truck companies to formulate response plans in the event of a collision, disabled vehicle or complete roadway blockage within the construction zone. These plans included personnel safety, blockage verification, notification to all responders, scene access through closed ramps and work areas, radio interoperability, multi-agency incident management procedures, wrong-way driving procedures for responders, procedures for reopening of the roadway and barrier movement for responders. Continued improvements to the plan were incorporated to keep the plan current and responsive to developing needs through the observations and experience of responders.

The WSP has primary enforcement responsibility on the I-90 viaduct. Due to the heavy daily traffic and the tight confines of the construction zone, motorcycles were determined to be the most effective enforcement tool. The Eastern Region of DOT has purchased motorcycles in past years to support speed enforcement in construction zones. For the I-90 viaduct project, DOT agreed to purchase one motorcycle and the WSP supplied a trained trooper to operate the motorcycle. In exchange for the motorcycle purchase, the WSP motorcycle unit was required to work 198 hours per year in local DOT construction zones for a three year period. Unmarked Aggressive Driving Apprehension Team vehicles were also used within the zone as a supplement to the four motorcycles assigned to the project.

The construction project and associated ramp closures created substantial impacts on traffic flow and patterns in downtown Spokane. DOT partnered with the City of Spokane to identify appropriate lane reconfigurations and adjustments to traffic signal timing and sequencing on city streets to support the objectives of maximizing traffic flow downtown, avoiding adverse impacts to commerce, and making freeway access as efficient as possible. Some of the ramp closures during the project created modifications to traffic patterns on city streets that presented opportunities for motorists to drive dangerously if they chose to violate the traffic control devices. The Spokane Police Department traffic unit committed substantial enforcement resources to deter dangerous driving associated with these reconfigurations.

The Results

As a result of extensive preplanning, public education and targeted enforcement within the construction zone, the WSP investigated only three collisions in the actual construction zone for both the 2006 and 2007 seasons versus a yearly average of 17 collisions in this area. The WSP also did not experience an increase in collisions leading into the construction zone in spite of the predictions of many that this construction project would cause a large increase in collisions and road blockages.

I-90 Downtown Spokane Viaduct Collisions:

Average Annual Collisions= 17
Collisions in 2006= 0
Collisions in 2007= 3
Collisions in the approach areas to the construction zone = No increase

The enforcement component of this project focused primarily on speed and following too close violations within and just prior to the actual construction area. The goal was to reduce speeds and increase following distances so any slowdowns, stoppages or disabled vehicles within the construction area would not result in collisions.

In 2006 and 2007, there were significant increases in the enforcement of speeding and following too closely violations which contributed to the overall safety and traffic flow within the construction zone.

Selected contacts from MP 280 to 282 May 1 thru Sept 30			
	2005	2006	2007
DUI	10	10	13
Physical Control	2	0	1
Speed	479	851	1058
Following too closely	47	60	66
H/R	1	5	6
DUI Drugs w/test	0	1	0
Restraint	45	45	51
Collisions			
Non Reportable	2	4	12
Property Damage	27	29	23
Injury	17	14	15
Fatal	0	0	0
Unable to Locate	1	2	1
miscoded	2	1	0
total	49	50	51

Proven Strategies, Best Practices and Innovate Strategies

As a result of collaborative partnerships and problem solving with area stakeholders, a comprehensive plan was developed and executed. The plan included extensive communication among stakeholders. This collaborative approach helped modify signage, lane configurations, light timing cycles and other issues that became evident after the project was initially launched. Through continued communication of information and experiences from all the partners, adjustments were made to the plan and response capability resulting in an always current, flexible and well-executed plan.

The construction project, response planning, resource deployment and enforcement activities in the area surrounding the I-90 downtown Spokane viaduct resulted in exceptional traffic safety results. Considering the substantially reduced speed limit, loss of lanes, significant lane width restrictions, loss of roadway shoulders and the closing of numerous ramps during the summer months of 2006 and 2007, the collision results on the viaduct are remarkable. The combined efforts of this project resulted in only three collisions in the viaduct construction zone in a two year period and no increase in collisions in the approach areas prior to the viaduct.

Innovative engineering and response elements of the plan were instrumental in achieving the project goals such as barrier movement for responders to access collisions while using the wrong way response and radio interoperability enabling responders to communicate with each other. These components of the plan allowed safe, swift and efficient response; quick movement and removal of wreckage when it did occur; and the removal of disabled vehicles from the viaduct, returning it to a state of consistent and safe traffic flow. This nearly eliminated all collisions in the viaduct and it also eliminated the tremendous spike in secondary collisions that were expected in the approach areas.

The extensive use of the media, the internet website and distribution of brochures by the partners were instrumental in informing the region's motorists of the viaduct's progress, its restrictions, and the enforcement activities taking place daily. This resulted in an obvious change in driving behavior.

Given the complexity of this project's problems, the comprehensive plans and actions taken, and the results which were achieved by the partners, we ask that this nomination be accepted for consideration as a recipient of a Target Zero Award.